

# Cisco Media Convergence Server 7845I-3000

## Key Benefits and Features

### Performance

Utilizing dual Intel® Prestonia Xeon™ 3.06GHz processors, the Cisco MCS 7845I-3000 is a robust highly available server platform designed to support today's IP Communications applications. The MCS 7845I-3000 includes such innovations as variable speed fan support, NetBAY™ cabling support, Light Path Diagnostics™ and Chipkill™ memory support. The Cisco MCS 7845I-3000 occupies only 2U rack space while providing the features most requested in a high availability server platform.

### Memory

The MCS 7845I-3000 supports up to 4GB of Double Data Rate (DDR) memory. The increased processor performance coupled with DDR memory allows customers to retrieve and process information faster and more efficiently. DDR memory executes twice the number of operations per cycle than traditional SDRAM memory, effectively doubling the data exchange rate between memory and processors.

### Variable Speed Fan Support

The MCS 7845I-3000 includes variable speed fans to reduce operating noise. Through the use of temperature sensors within the server the speed of the fans is adjusted to maintain the proper cooling. This reduces the noise generated by the fans by only operating them when required and at a speed based upon the cooling requirements.

### Advanced Connectivity Technology

The MCS 7845I-3000 supports IBM's new NetBAY Advanced Connectivity Technology products that helps reduce KVM costs by letting administrators' chain systems together with Cat5 cable. In addition to reducing overall costs, Advanced Connectivity Technology reduces bulk cable clutter, making servers more accessible and serviceable in the rack.

### High Availability

High availability on the MCS 7845I-3000 is achieved through the following mechanisms:

- Redundant Hot Swap 514W Power Supplies
- Hot Swap SCSI Hard Drives configured using RAID 1
- Hot Swap Variable Speed Fans

Figure 1  
MCS 7845I-3000





## Serviceability

### Light Path Diagnostics™

The MCS 7845I-3000 is equipped with Light Path Diagnostics™. Light Path Diagnostics provides a central information LED panel (visible without removing the cover) and individual LED lights throughout the system on items like memory DIMMs, PCI slots, power supplies and CPUs. IT can then quickly view system status and in the case of a problem, service personnel can pinpoint the specific failing component, helping reducing downtime and service costs. This can provide increased availability, since nontechnical personnel can now report error conditions without removing the top cover and exposing vital components to further risk. If the system error LED on the front of the server is on, one or more LEDs inside the server or on the power supply will be on. These LEDs will help identify and locate problems with some server components. By following the path of lights, you can quickly identify the type of system error that occurred. The MCS 7845I-3000 is designed so that any LEDs that are illuminated remain illuminated when the server shuts down as long as the AC power source is good and the power supply can provide +5 VDC to the server.

Light Path Diagnostics™ provide indication of failures for the following conditions:

- Power Supply 1 failure
- Power Supply 2 failure
- Error on Voltage Regulator Module
- One or both processors failed.
- Server power supplies are no longer redundant
- Memory failure
- System shutdown due to a system over load condition
- SCSI bus failure
- Non-maskable interrupt occurred
- Error occurred on adapter in PCS-X slots 1 or 2 or on one of the integrated PCI devices on the system board.
- Service processor failure
- Error on adapter on PCI-X slots 3 or 4
- Fan failure or slow operation
- Error on PCI slot 5
- System temperature exceeded maximum rating

### Enhanced Predictive Failure Analysis

The MCS 7845I-3000 supports Enhanced Predictive Failure Analysis (PFA) on hot swap fans, power supplies, processors and memory and voltage regulator modules. Through diagnostics the MCS 7845I-3000 is able to anticipate failures in these devices and generate an alert, which can allow IT to quickly replace the components before a failure actually occurs. An example of PFA is its ability to monitor variations in electrical input/output to the power supplies and cooling fans.



### **Chipkill™ Memory Support**

The MCS 7845I-3000 is equipped with Chipkill™ memory as part of its architecture. Chipkill™ Memory which protects, at the motherboard level, against 1, 2, 3 and 4 bit memory errors—protecting against 99% of memory failures. This, coupled with enhanced predictive failure analysis helps administrators keep planned and unplanned downtime to a minimum.

### **Targeted Solutions**

#### **Cisco Unity**

Cisco Unity™ -an integral component of the Cisco IP Communications system-is the premier unified communications solution for enterprise-scale organizations. It delivers powerful unified messaging (e-mail, voice, and fax messages sent to one inbox) and intelligent voice messaging (full-featured voice mail providing advanced functionality) to improve communications, boost productivity, and enhance customer service capabilities across your organization. Cisco Unity provides advanced, convergence-based communication services and integrates them with the desktop applications you use every day. With Cisco Unity Unified Messaging, you can listen to

your e-mail over the telephone, check voice messages from the Internet, and-when integrated with a supported third-party fax server-forward faxes to wherever you are. Cisco Unity Voice Messaging features robust automated attendant functionality that includes intelligent routing and easily customizable call screening and message notification options.

#### **Model and Capacity**

There are two models of MCS-7845I-3000 servers supporting the Unity application. The MCS-7845I-3.0-ECS1 is specially targeted at voice messaging deployments, with more disk drive capacity to support storage of voice messages on the same server. The MCS-7845I-3.0-ECS2 is specifically targeted at unified messaging deployments, with less required disk drive capacity because messages are stored on a separate server.

The MCS-7845I-3.0-ECS1 is a MCS 7845I-3000 targeted at Unity deployments supporting voice messaging only. It is equipped with dual Prestonia Xeon 3.06GHz processors, 1 GB SDRAM, four 36 GB SCSI hard disk drives (RAID 1 configured) plus two 72 GB hard disk drives (RAID 1 configured) and redundant power supplies. A single MCS-7845I-3.0-ECS1 can support up to 2200 voice messaging subscribers.

The MCS-7845I-3.0-ECS2 is a MCS 7845I-3000 targeted at Unity deployments supporting unified messaging. It is equipped with dual Prestonia Xeon 3.06GHz processors, 1 GB SDRAM, four 36 GB SCSI hard disk drives (2 X RAID 1 configured) and redundant power supplies. A single MCS-7845I-3.0-ECS2 can support up to 2500 unified messaging subscribers or voice messaging subscriber if the messages are stored on a separate server.

For more information regarding Cisco Unity, visit:

<http://www.cisco.com/en/US/products/sw/voicesw/ps2237/index.html>



## Cisco Media Convergence Server 7865I-1500 Specifications

Table 1 Cisco Media Convergence Server 7845I-3000 Specifications

<b>Processor</b>	
Processor (CPU)	Prestonia Xeon
Processor internal clock speed	3060MHz
L2 cache	512KB
Maximum processors	2
Processors installed	1
BIOS type	Flash
<b>Memory</b>	
Memory maximum	4048MB
Memory bus clock	200MHz
Memory Technology	PC2100 DDR SDRAM (must be installed in pairs)
Total RAM slots	4 (Two-way interleaved)
<b>Floppy Disk</b>	
Diskette Size	3.5"
Read/Write Capacity per Diskette	1.44MB/1.2MB/720KB formatted
Drive Supported	One
Drive Rotation (high/med/low)	300/360/300 rpm
Transfer Rate (high/med/low)	500/500/250KB per second
Bytes/Sector	512
Sectors/Track (high/med/low)	18/15/9
Tracks/Side	80/80
Track to track access time	3/3/6ms
Average access times (high/med/low)	174/94/94ms
Read/Write heads	2
<b>DVD-ROM</b>	
DVD Interface	IDE
DVD Single Layer read speed	6.7 to 16x (Full CAV)
DVD Dual Layer read speed	5 to 12x (Full CAV)
DVD Video	3.3 to 8x (Full CAV)
DVD-R – 3.95GB	1 to 2.3x (Full CAV)



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DVD-R – 4.7GB	1 to 2.3x (Full CAV)
DVD-RAM – 2.6GB	2x ZCLV
DVD-RAM – 4.7GB	2x ZCLV
CD-ROM/CD-R	17 to 40x (Full CAV)
CD-RW	10 to 24x (Full CAV)
CD-I/Video CD	4.3 to 10x (Full CAV)
CD-DA (DAE)	12x CLV
CD-DA (Audio-Out)	4 to 10x (Full CAV)
<b>RAID Controller</b>	
Controller Model	IBM ServRAID-5i
Interface	PCI 66MHz, 64-bit
Cache	128MB
RAID Levels Supported	0, 1, 5, 10, 50
SCSI protocols supported	Ultra2, Ultra3
SCSI peak data transfer rate	320MB
Maximum logical drives	8
Maximum physical drives	16
<b>Hard Disk</b>	
Installed hard disk rpm	10,000
Hard disk average seek time	4.9ms
Hot swappable bays	6 (4 free)
Hard disk interface type	Ultra SCSI
Maximum hard drive capacity	440.4GB with six 73.4GB internal disks
<b>Network Connectivity</b>	
NIC	Dual on board 10/100/1000
Connector	Two RJ45 on rear of server
10BaseT Cable Support	Categories 3, 4, or 5 UTP (2 or 4 pair) Up to 328 feet (100 meters)
100BaseT Cable Support	Category 5 UTP (2 pair) Up to 328 feet (100 meters)
1000BaseT Cable Support	Category 5 UTP, 5E UTP, 6 UTP (2 pair) Up to 328 feet (100 meters)



Table 1 Cisco Media Convergence Server 7845I-3000 Specifications

<b>Graphics Subsystem</b>	
Graphics type	2D
Graphics chipset	ATI Rage XL
Video RAM type	SDRAM
Video RAM installed	8MB
Video RAM maximum	8MB
Maximum resolution	VGA and SVGA
Maximum colors	16777216
Graphics bus interface	PCI
<b>Interfaces</b>	
Serial Ports	1
Parallel Ports	0
USB 1.1 Ports	2 on rear and 1 on front
Keyboard Port	1
Mouse Port	1
Audio Ports	None
System Management Port	IBM integrated system management (ISMP) <ul style="list-style-type: none"><li>• Service processor with Light Path Diagnostics™</li><li>• Interconnect port</li><li>• Dedicated I/O port</li></ul>
<b>Security</b>	
Power-on password	
Remote control security settings	
Selectable boot device	
Keyboard password	
System Management Security <ul style="list-style-type: none"><li>• User login password</li><li>• Read-only or read/write access</li><li>• Dial-in call-back</li></ul>	
<b>Expansion Options</b>	
PCI-X non-hot-plug 133MHz/64-bit slots	2
PCI-X non-hot-plug 100MHz/64-bit slots	2 (half-height, not usable for Cisco apps.)
PCI non-hot plug 33MHz/32-bit slots	1 (half-length, not usable for TDM cards)



Table 1 Cisco Media Convergence Server 7845I-3000 Specifications

<b>Power</b>	
Maximum input power	514W
Auto-ranging AC mains input	Yes
Power Factor Correction (PFC)	Yes
Maximum hot swap power supplies	2
Hot swap power supplies installed	2
Mains input frequency	50-60Hz
Input voltage low range	90VAC minimum 137VAC maximum
Input voltage high range	180VAC minimum 265VAC maximum
Input kilovolt-amperes (kVA) approximate	0.1kVA minimum 0.62kVA maximum
<b>Environmental</b>	
Air temperature – server on	50.0 to 95.0 F (0 to 35 C) Altitude: 0 – 6998ft (0 – 2133m)
Air temperature – server off	-40.0 to 140 F (-40 to 60 C) Altitude: 0 – 6998ft (0 – 2133m)
Humidity – server on or server off	8% to 80%
Heat emissions minimum	341BTU/Hr.
Heat emissions maximum	2200 BTU/Hr.
Sound emissions idle	6.5 bel
Sound emissions maximum	6.5 bel
Bystander sound pressure idle	48dBa
Bystander sound pressure operating	48dBa
Cooling system	8 fans installed
<b>Dimensions</b>	
Form factor	Rack mount 2U
Rack mounting	Included for standard 3rd party rack
Weight	46.5 to 62lbs (21.09 to 28.12kg)
Height	3.36 inches (85.4mm)
Width	17.5 inches (443.6mm)
Depth	27.48 inches (698mm)



## Ordering Information

Servers are a component of an order for a Cisco IP Communications Application. The following table lists the product IDs to be used to order a Cisco IP Communications Application using the Dynamic Configuration Tool found on [www.cisco.com](http://www.cisco.com).

Table 2 Ordering Information

Application	Product IDs
Cisco Unity	UNITY-BUNDLE

The following table lists the specific component product IDs for each application supported by the MCS-7845I-3000. All models share the same common components listed below:

- Floppy drive
- DVD drive
- Redundant power supplies, hot swap.
- Third party rail kit

Table 3 Cisco Unity

Product ID	Components
MCS-7845I-3.0-ECS1	Media Convergence Server 7845I-3000 to be used with Cisco Unity for voice messaging only deployments and equipped as follows: <ul style="list-style-type: none"><li>• Dual Pentium 4 3.06GHz processors</li><li>• 1GB SDRAM (2x512MB DIMM)</li><li>• Four 36GB U320 SCSI hard disks (2xRAID 1)</li><li>• Two 72GB U320 SCSI hard disks (1xRAID 1)</li><li>• Redundant fans</li></ul>
MCS-7845I-3.0-ECS2	Media Convergence Server 7845I-3000 to be used with Cisco Unity for unified messaging deployments and equipped as follows: <ul style="list-style-type: none"><li>• Dual Pentium 4 3.06GHz processors</li><li>• 1GB SDRAM (2x512MB DIMM)</li><li>• Four 36GB U320 SCSI hard disks (2xRAID 1)</li><li>• Redundant fans</li></ul>

## Spares

MEM-7835I-2.4-512=	Spare 512MB SDRAM DIMM for MCS 7835I-2400 server
MCS-7835I-2.4-36=	Spare 36GB U160 hot plug SCSI drive for MCS 7835I-2400 server
MCS-7835I-2.4-PWR=	Spare 350W power supply, hot plug for MCS 7835I-2400 server

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